

Please add the following new claims:

(63) (New) A method for simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein the test compounds are disposed on a support;
- (b) providing a porous membrane;
- (c) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with the liquid layer surrounding the detector layer and the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane to the detector layer.

64. (New) A method for simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein the test compounds are disposed on a porous membrane;
- (b) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in

contact with a liquid layer surrounding the detector layer thereby allowing diffusion of the test compounds through the porous membrane to the detector layer.

65. (New) A method for simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, wherein the cells are grown on a porous membrane, comprising:

- (a) providing an array of test compounds, wherein the test compounds are disposed on a support;
- (b) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane to the detector layer of physiologically viable cells.

(66) (New) The method according to any of claims 63, 64 or 65, wherein the porous membrane limits lateral spread of the test compounds during diffusion of the test compounds through the porous membrane to the detector layer.

(67) (New) The method according to any of claims 63 or 65, wherein the support is a non-porous substrate.

68. (New) The method according to any of claims 63, 64 or
65, wherein the physiologically viable cells form a monolayer.

69. (New) The method according to any of claims 63, 64 or
65, wherein the physiologically viable cells are supported by an
optically clear substrate.

70. (New) The method according to any of claims 63, 64 or
65, wherein the porous membrane is constructed of a non-
absorbent material with pores of regular and defined diameter
which traverse the membrane directly from the upper to the lower
side. *

71. (New) The method according to any of claims 63, 64 or
65, wherein the detector layer is held stationary in the field
of view of an optical detector and the array of test compounds
is moved into contact with said detector layer during the course
of measurement.

72. (New) The method according to any of claims 63, 64 or
65, wherein the array of test compounds is held stationary in
the field of view of an optical detector and the detector layer
is moved into contact with said array of test compounds during

the course of measurement.

(73) (New) The method according to any of claims 63, 64 or 65, wherein the array of test compounds is generated on the support by combinatorial chemistry.

(74) (New) A method for screening test compounds for bioactivity by simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein each compound is disposed on a support;
- (b) providing a porous membrane;
- (c) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with the liquid layer surrounding the detector layer and the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane to the detector layer; and
- (d) detecting a response of the detector layer to the test compound.

75. (New) A method for screening test compounds for bioactivity by simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells, comprising:

- (a) providing an array of test compounds, wherein each compound is disposed on a porous membrane;
- (b) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with a liquid layer surrounding the detector layer thereby allowing diffusion of the test compounds through the porous membrane to the detector layer; and
- (c) detecting a response of the detector layer to the test compound.

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76. (New) A method for screening test compounds for bioactivity by simultaneously exposing an array of test compounds to a detector layer of physiologically viable cells wherein the cells are grown on the porous membrane, comprising:

- (a) providing an array of test compounds;
- (b) bringing the array of test compounds in close apposition with the detector layer so that the porous membrane is in contact with the array of test compounds thereby allowing diffusion of the test compounds through the porous membrane

to the detector layer; and

- (c) detecting a response of the detector layer to the test compound.

77. (New) The method according to any of claims 74, 75 or 76, wherein the porous membrane limits lateral spread of the test compounds during diffusion of the test compounds through the porous membrane to the detector layer.

78. (New) The method according to any of claims 74, 75 or 76, wherein the response is recorded by a sequence of images.

79. (New) The method according to any of claims 74, 75 or 76, wherein the detected response is a change in a luminescence property of the physiologically viable cells in the detector layer.

80. (New) The method according to any of claims 74, 75 or 76, wherein the detected response is a change in a fluorescence property of the physiologically viable cells in the detector layer.

81. (New) The method according to any of claims 74 or 76,

wherein the support is a non-porous substrate.

(82.) (New) The method according to any of claims 74, 75 or
76, wherein the physiologically viable cells form a monolayer.

(83.) (New) The method according to any of claims 74, 75 or
76, wherein the physiologically viable cells are supported by an
optically clear substrate.

84. (New) The method according to any of claims 74, 75 or
76, wherein the porous membrane is constructed of a non-
absorbent material with pores of regular and defined diameter
which traverse the membrane directly from the upper to the lower
side.

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(85.) (New) The method according to any of claims 74, 75 or
76, wherein the detector layer is held stationary in the field
of view of an optical detector and the array of test compounds
is moved into contact with said detector layer during the course
of measurement.

(86.) (New) The method according to any of claims 74, 75 or
76, wherein the array of test compounds is held stationary in

the field of view of an optical detector and the detector layer
is moved into contact with said array of test compounds during
the course of measurement.

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87. (New) The method according to any of claims 74, 75 or
76, wherein the array of test compounds is generated on the
support by combinatorial chemistry.